



ECE 241 – Digital Design

Term – Fall 2018 (201809)

Instructor

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Office Hours

Days: by appointment via email
Location: UVC A207 or EOW 419

Course Objectives

To understand fundamental concepts in analyzing and designing combinational and sequential logic circuits. To gain experience with implementation and testing of digital systems.

Learning Outcomes

Understanding Boolean algebra and its applications. Understanding binary and hexadecimal number systems. Understanding the characteristics and behavior of logic gates and acquiring the capability to analyze and design combinational and sequential logic circuits. Gaining an introductory experience with implementation and testing of digital logic systems together with supporting software design and development tools.

Syllabus

Binary numbers. Boolean algebra and logic gates. Combinational circuits, gate-level minimization. Synchronous finite-state machines. Registers and counters. Synchronous sequential logic circuits. Implementation technologies.

Lectures

A-Section(s): A01 / CRN 10898
Days: Tuesday, Wednesday, Friday
Time: 8:30am – 9:20am
Location: BWC A104

Labs

		(Location: ELW A359)	TA (email)
B01	Mon	10:15-13:05	tbd
B02	Tue	9:30-12:20	tbd
B03	Wed	9:30-12:20	tbd
B04	Thu	10:30-13:20	tbd
B05	Wed	12:30-15:20	tbd
B06	Mon	13:15-16:05	tbd

Required Text

Title: **Digital Design
With An Introduction to the Verilog HDL,
VHDL and SystemVerilog (6th Edition)**
Author: Mano and Ciletti
Publisher: Pearson
Year: 2018

Optional Text

none specified

References: none specified

Assessment

Assignments	0%	no assignments will be graded for credit.
Labs	35%	as per Lab sections schedule
Test #1	15%	Date: TBD – Room BWC A104
Test #2	15%	Date: TBD – Room BWC A104
Final Exam	35%	TBD

Notes:

Failure to complete all laboratory requirements will result in a grade of N being awarded for the course.
Failure to pass the final exam will result in a failing grade for the course.

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

<https://web.uvic.ca/calendar2018-09/undergrad/info/regulations/grading.html>

There will be no supplemental examination for this course.

Note to Students

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Secretary to set up an appointment.

Accommodation of Religious Observance:

<https://web.uvic.ca/calendar2018-09/undergrad/info/regulations/religious-observanc.html>

Policy on Inclusivity and Diversity:

<https://web.uvic.ca/calendar2018-09/general/policies.html>

Standards of Professional Behaviour:

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour, which contains important information regarding conduct in courses, labs, and in the general use of facilities.

<https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf>

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Undergraduate Calendar for the UVic policy on academic integrity.

<https://web.uvic.ca/calendar2018-09/undergrad/info/regulations/academic-integrity.html>

Equality: This course aims to provide equal opportunities and access for all students to enjoy the benefits and privileges of the class and its curriculum and to meet the syllabus requirements. Reasonable and appropriate accommodation will be made available to students with documented disabilities (physical, mental, learning) in order to give them the opportunity to successfully meet the essential requirements of the course. The accommodation will not alter academic standards or learning outcomes, although the student may be allowed to demonstrate knowledge and skills in a different way. It is not necessary for you to reveal your disability and/or confidential medical information to the course instructor. If you believe that you may require accommodation, the course instructor can provide you

with information about confidential resources on campus that can assist you in arranging for appropriate accommodation. Alternatively, you may want to contact the Resource Centre for Students with a Disability located in the Campus Services Building.

The University of Victoria is committed to promoting, providing, and protecting a positive, and supportive and safe learning and working environment for all its members.

Course Lecture Notes

Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.